

CLAIMS

What is claimed is:

1. A clean bench, comprising:

5 a cabinet;

 a particle-conducting basin arranged in the upper portion of said cabinet;

 an adjustable canopy arranged above said particle-conducting basin, defining a working space with said particle-conducting basin;

10 a fan arranged under said particle-conducting basin of said cabinet;

 and

 a filter arranged under said particle-conducting basin of said cabinet.

15 2. The clean bench according to claim 1, wherein said fan is a centrifugal fan.

3. The clean bench according to claim 1, wherein said filter is a HEPA filter.

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4. The clean bench according to claim 1, wherein said filter is a ULPA filter.

25 5. The clean bench according to claim 1, wherein said filter further comprises a HEPA pre-filter.

6. The clean bench according to claim 1, wherein said filter further

comprises a ULPA pre-filter.

7. The clean bench according to claim 1, wherein said particle-conducting basin comprises a bottom partition with plural outlets

5 and four side walls.

8. The clean bench according to claim 7, wherein said four side walls have a slope profile.

10 9. The clean bench according to claim 7, wherein said four side walls have a sticky surface toward said working space.

10. The clean bench according to claim 1 further comprising a high-pressure spray gun connected with a center clean air supply system.

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11. The clean bench according to claim 1 further comprising a vacuum suction unit connected with a center vacuum suction system.

12. The clean bench according to claim 1, wherein said adjustable
20 canopy is a half-cylindrical adjustable canopy.

13. The clean bench according to claim 12, wherein said half-cylindrical adjustable canopy comprises a front quarter-cylindrical movable canopy and a back quarter-cylindrical fixed canopy.

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14. The clean bench according to claim 13, wherein said front quarter-cylindrical movable canopy comprises a glove port.

15. The clean bench according to claim 13, wherein said front quarter-cylindrical movable canopy is made of a transparent material.

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16. The clean bench according to claim 13, wherein said back quarter-cylindrical fixed canopy has a sticky surface toward said working space.

10 17. The clean bench according to claim 1 further comprising a light source in said working space.

18. A clean bench, comprising:

a cabinet;

15 a particle-conducting basin arranged in the upper portion of said cabinet;

an adjustable canopy arranged above said particle-conducting basin, defining a working space with said particle-conducting basin;

20 a first fan arranged under said particle-conducting basin of said cabinet;

a first filter arranged under said particle-conducting basin of said cabinet;

a second fan arranged above said adjustable canopy ; and

a second filter arranged above said adjustable canopy.

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19. The clean bench according to claim 18, wherein said first fan is a centrifugal fan.

20. The clean bench according to claim 18, wherein said first filter is
a HEPA filter.

5 21. The clean bench according to claim 18, wherein said first filter is
a ULPA filter.

22. The clean bench according to claim 18, wherein said first filter
further comprises a HEPA pre-filter.

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23. The clean bench according to claim 18, wherein said first filter
further comprises a ULPA pre-filter.

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24. The clean bench according to claim 18, wherein said second fan is
a centrifugal fan.

25. The clean bench according to claim 18, wherein said second filter
is a HEPA filter.

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26. The clean bench according to claim 18, wherein said second filter
is a ULPA filter.

27. The clean bench according to claim 18, wherein said second filter
further comprises a HEPA pre-filter.

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28. The clean bench according to claim 18, wherein said second filter
further comprises a ULPA pre-filter.

29. The clean bench according to claim 18, wherein said particle-conducting basin comprises a bottom partition with plural outlets and four side walls.

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30. The clean bench according to claim 29, wherein said four side walls have a slope profile.

31. The clean bench according to claim 29, wherein said four side
10 walls have a sticky surface toward said working space.

32. The clean bench according to claim 18 further comprising a high-pressure spray gun connected with a center clean air supply system.

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33. The clean bench according to claim 18 further comprising a vacuum suction unit connected with a center vacuum suction system.

34. The clean bench according to claim 18, wherein said adjustable
20 canopy is a rectangular adjustable canopy.

35. The clean bench according to claim 34, wherein said rectangular adjustable canopy comprises a top partition, a front shutter, a rear wall, and two side walls.

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36. The clean bench according to claim 35, wherein said front shutter comprises a glove port.

37. The clean bench according to claim 35, wherein said front shutter is made of a transparent material.

5 38. The clean bench according to claim 35, wherein said rear wall and said side walls have a sticky surface toward said working space.

39. The clean bench according to claim 18 further comprising a light source in said working space.

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